U.S. Department of Energy

Washington, D.C.

ORDER

DOE O 413.3

Approved: 10-13-00
Sunset Review: 10-13-02
Expires: 10-13-04

SUBJECT: PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS

1. OBJECTIVES.

   a. To provide Department of Energy (DOE), including the National Nuclear Security Administration (NNSA), project management direction for the acquisition of capital assets that are delivered on schedule, within budget, and fully capable of meeting mission performance and environmental, safety, and health standards. (See paragraph 8 for definitions of terms used in this Order.)

   b. To implement Office of Management and Budget (OMB) Circulars A-109 (to be replaced by A-11, Part 3), A-11, A-123, A-127, and A-130. (See paragraph 6 for a list of references cited in this Order.)

   c. To implement DOE P 413.1, PROGRAM AND PROJECT MANAGEMENT POLICY FOR THE PLANNING, PROGRAMMING, BUDGETING, AND ACQUISITION OF CAPITAL ASSETS.

2. CANCELLATION. DOE N 430.1, ENERGY SYSTEMS ACQUISITION ADVISORY BOARD PROCEDURES, dated 10-28-97. Cancellation of a directive does not, by itself, modify or otherwise affect any contractual obligation to comply with the directive. A canceled directive that is incorporated by reference in a contract remains in effect until the contract is modified to delete the reference to the requirements in the canceled directive.

   This Order supersedes specific project management provisions within DOE O 430.1A, LIFE CYCLE ASSET MANAGEMENT. The specific paragraphs canceled by this Order are 6e(7); 7a(3); 7b(11) and (14); 7c(4), (6), (7), (11), and (16); 7d(4) and (8); 7e(3), (10), and (17); Attachment 1, Definitions (item 30 - Line Item Project, item 42 - Project, item 48 - Strategic System); and Attachment 2, Contractor Requirements Document (paragraph 1d regarding a project management system). The remainder of DOE O 430.1A remains in effect.

3. APPLICABILITY. This Order applies to all DOE projects, including NNSA, regardless of funding type or phase of execution.

a. DOE Elements. The requirements in this Order are mandatory for DOE, including NNSA, on all Major System (MS) projects [total project cost (TPC) $400M or greater and as defined in paragraph 8] and Other Projects (TPC less than $400M and as defined in paragraph 8).

b. Contractors. The Contractor Requirements Document (CRD), Attachment 1, sets forth the requirements of this Order that must be applied to management and operating/management and integrating (M&O/M&I) contractors and other prime contractors responsible for project execution at DOE facilities, including NNSA, as adapted to meet site-specific needs. Federal instructions for implementing the CRD are included in Chapter VII, paragraph 3. Contractor compliance with the CRD will be required to the extent set forth in a contract.

c. Tailoring. Tailoring may be applied to all projects. The principles of this directive will be applied on a tailored basis (see paragraph 8) as appropriate to the size and risks of a project. The use of tailoring will be stated in the appropriate documents and subject to the approval of the Acquisition Executive (AE).

d. Implementation. All projects with an approved performance baseline as of the approval date noted on this Order are exempted from the requirement for Critical Decision (CD)-1, Approve Preliminary Baseline Range. Projects between CD-1 and CD-2, Approve Performance Baseline, may request an exception to specific documentation requirements from the Secretarial Acquisition Executive (SAE), through the appropriate Under Secretary, on a case-by-case basis. All projects that have not received CD-3 approval (see Chapter I) must ensure that the contractor complies with the CRD. Exceptions to this Order can be requested on a case-by-case basis from the SAE. Any exception to the requirements set forth in OMB circulars must be approved by OMB.

e. Implementation Review. This Order will be subject to a formal implementation review through the DOE directives systems 12 months after the date of publication. The purpose of this review is to incorporate lessons learned and improvements.

4. REQUIREMENTS. Requirements are set forth in Chapters I through VII. Mandatory procedures, definitions, and management processes are further addressed in the DOE Program and Project Management Manual (see paragraph 6, References).

5. RESPONSIBILITIES. This paragraph provides the basic framework for roles and responsibilities for program and project management at the various operating levels within the Department, including NNSA. Line managers, extending from the Secretary to the Deputy Secretary (who also serves as DOE's Chief Operating Officer) and/or Under Secretary for NNSA and Under Secretary for Energy, Science, and Environmental Management; the Program Secretarial Officers (PSOs), including the Deputy Administrators for NNSA; the

Operations/Field Office Managers; the Federal Project Managers, and the Contractor Project Managers (i.e., contractor executives responsible for execution of the project), will be held responsible and accountable for successfully developing, executing, and managing DOE projects within the baseline (cost, schedule, and scope). Attachment 2 is a chart on authority, roles, and responsibility for line managers. Attachment 3 shows a summary of decision authority thresholds for the SAE/AE line managers. Any DOE definition of Federal responsibilities that is inconsistent with this Order is hereby rescinded.

a. Deputy Secretary/SAE. As SAE, the Deputy Secretary of Energy as senior manager responsible and accountable for all project acquisitions, may delegate AE authority for Other Projects to the PSOs, with the concurrence of the Under Secretary (for Energy, Science and Environment); or for the NNSA, to the Administrator, NNSA who may redelegate AE authority at his discretion (see Attachment 3). The SAE chairs the Energy Systems Acquisition Advisory Board (ESAAB) and performs specific roles defined in this Order for projects designated as MS projects and for projects on the Chief Operating Officer Watch List. The SAE approves the site selections for facilities for new sites, the CDs, and Level 0 baseline changes for MS projects. The AE performs similar roles for projects under her/his purview.

b. Lead Program Secretarial Offices (LPSOs), Including the Deputy Administrators for NNSA.

(1) Recognizing that most field sites are multi-program, the LPSOs have overall line accountability for sitewide environment, safety, and health; safeguards and security; and implementation of policy promulgated by Headquarters staff and support functions.

(2) If LPSOs have project delivery responsibility, they establish project management support offices, reporting directly to them, to provide project management support throughout their organization.

c. Program Secretarial Officers (PSOs), Including the Deputy Administrators for NNSA, and Program Directors.

(1) Responsible for the success of all MS projects and Other Projects within their programmatic areas of control as the responsible and accountable officers.

(2) Serve as the AE for Other Projects that are not designated as MS projects. Approve the CDs and Level 1 baseline changes for those projects.

(3) Approve selection of the Federal Project Manager for projects where the equivalent AE functions have not been further delegated.

(4) Define the roles and responsibilities of the project management support office.

(5) Delegate, if desired, equivalent AE functions to a Senior Executive Service (SES) Program Manager or Operations/Field Office Manager for projects with a TPC less than $100M. The recipient of this AE delegation may recommend the elevation of a project to a higher-level AE at any time.

d. Program Manager.

(1) Directs project planning and execution roles for projects assigned by the PSO/AE.

(2) Initiates definition of mission need, based on input from sites, labs, and program.

(3) Oversees development of project definition, scope, and budget to support mission need.

(4) Initiates development of the Acquisition Strategy and Acquisition Plan (during the period of time preceding designation of the Federal Project Manager).

(5) Recommends a Federal Project Manager for those projects for which the PSO retains AE responsibility. Approves the Federal Project Managers where the Program Manager has been delegated AE authority.

(6) Develops performance measures, and monitors and evaluates performance throughout the life of a project.

(7) Allocates resources throughout the program.

(8) Oversees and manages the project line management organization.

(9) Performs functions as AE when so delegated by PSO.

e. Project Management Support Office.

(1) Provides independent oversight and reports directly to the PSO.

(2) Serves as the Secretariat for the PSO ESAAB-equivalent function.

(3) Coordinates quarterly project performance reviews and monthly/quarterly performance reports for the PSO.

(4) Coordinates with the Office of Engineering and Construction Management (OECM) to ensure effective and consistent implementation of this Order.

(5) Provides assistance and oversight to line project management organizations.

(6) Analyzes the full range of project management and project delivery issues for the PSO.

f. Operations/Field Office Manager, Including the Field Managers for NNSA Operations.

(1) Reports directly to an LPSO and has line accountability for contract management of all site program/project execution.

(2) Recommends a Federal Project Manager for those projects for which the PSO retains AE responsibility. Approves the Federal Project Manager where the Operations/Field Office Manager has been delegated AE authority.

(3) For projects with TPCs less than $20M, may delegate project planning and execution roles, including performance reviews, to a direct reporting subordinate manager (or SES subordinate manager for AE delegation).

(4) Performs functions as AE when so delegated by PSO.

g. Federal Project Manager.

(1) Responsible and accountable for project management activities of one or more discrete projects under his or her cognizance. General plant projects, accelerator improvement projects, capital equipment projects, and operating expense funded projects that are $5M or less are the responsibility of the Federal Project Manager as delegated by the Operations/Field Office Manager.

(2) Responsible and accountable for planning, implementing, and completing a project using a systems approach.

(3) Develops and implements the Acquisition Plan and Project Execution Plan.

(4) Defines project objectives, scope, cost, and schedule.

(5) Allocates project funding and authorizes work activities.

(6) Oversees the design, construction, environmental, safety, and health efforts performed by various contractors, and other functions enumerated in the Project Execution Plan in accordance with public law, regulations, and Executive orders.

(7) Serves as the single point of contact between Federal and contractor staff for all matters relating to the project and its execution.

(8) Serves as the Contracting Officer's Technical Representative, as appointed.

h. Contractor Project Manager.

(1) Manages day-to-day execution of assigned projects in a cost-effective manner, in accordance with requirements, procedures, and standards, as set forth in the contract (see CRD, Attachment 1).

(2) Executes projects within approved cost, schedule, and scope baselines, as defined in the Project Execution Plan, as set forth in the contract.

i. Office of the Chief Information Officer.

(1) Establishes and maintains Departmentwide guidance for Information Technology (IT) investment management processes, including IT (e.g., hardware, software, and application) and capital assets.

(2) Designs and guides implementation of the corporate-level IT investment management process.

(3) Provides IT investment management process assistance to Program Office, Field Office, site, and contractor locations, as requested.

(4) Collects process performance measurement information regularly and prepares a summary report on the status and performance of IT investment management processes.

j. Office of Engineering and Construction Management (Within the Office of the Chief Financial Officer).

(1) Serves as DOE's principal point of contact relating to project management.

(2) Develops policy and assists in the planning, programming, budgeting, and execution process for the acquisition of capital assets in coordination with PSOs and project management support offices.

(3) Supports the Office of the Secretary, the Chief Operating Officer, the Administrator of NNSA, and Program Secretarial Offices in the CD process for MS projects and oversight of DOE's project management process.

(4) Serves as Secretariat for the ESAAB and Chief Operating Officer Watch List functions.

(5) Establishes and oversees the Federal Project Manager career/professional development programs.

6. REFERENCES.

a. OMB Circular A-109, Major System Acquisitions, dated 4-5-76 (to be replaced by OMB Circular A-11, Part 3).

b. OMB Circular A-11, Part 3, Planning, Budgeting, and Acquisition of Capital Assets, dated 11-10-99, and the supplement to Part 3, Capital Programming Guide.

c. OMB Circular A-123, Management Accountability and Control, dated 6-21-95.

d. OMB Circular A-127, Financial Management Systems, dated 7-23-99.

e. OMB Circular A-130, Management of Federal Information Resources, dated 2-8-96.

f. OMB Circular A-131, Value Engineering, dated 5-21-93.

g. DOE O 430.1A, LIFE CYCLE ASSET MANAGEMENT, dated 10-14-98.

h. DOE P 413.1, PROGRAM AND PROJECT MANAGEMENT POLICY FOR THE PLANNING, PROGRAMMING, BUDGETING, AND ACQUISITION OF CAPITAL ASSETS, dated 6-10-00.

i. DOE M 413.X, MANUAL FOR PROGRAM AND PROJECT MANAGEMENT FOR THE PLANNING, PROGRAMMING, BUDGETING, AND ACQUISITION OF CAPITAL ASSETS, to be issued.

j. *Department of Energy Acquisition Guide: A DOE Guide to the Award and Administration of Contracts,* Office of Policy, Office of Procurement and Assistance Management, dated 9-30-98.

7. CONTACT. Questions concerning this Order should be directed to the Office of Engineering and Construction Management, 202-586-1784.

8. DEFINITIONS.

a. Acquisition Plan. The Acquisition Plan provides the procurement and contracting detail for elements of a system, program, or project. The Acquisition Plan is execution oriented and provides the framework for conducting and accomplishing the procurements and includes actions from solicitation preparation through contract award administration.

b. Acquisition Strategy. The acquisition strategy establishes the framework within which detailed acquisition planning and program execution are accomplished. The requirements document describes what DOE needs to buy, while the acquisition strategy describes how the Department will acquire capital assets. Once approved, it should reflect the approving authority's decisions on all major aspects of the contemplated acquisition. The acquisition strategy describes the relationships of essential program elements (e.g., management, technical, resources, testing, safety, procurement, and contracting).

c. Baseline and Change Control Levels. The project baseline consists of cost, schedule, and scope as stated on the Project Data Sheet (PDS), the project baseline summary, or similar documents. A baseline range is established at CD-1, Approve Preliminary Baseline Range, for tracking purposes. A performance baseline, against which project performance will be measured, is established at CD-2, Approve Performance Baseline. (See Chapters 1 and 2 for more information on CDs.)

d. Capital Assets. Land, structures, equipment, and information technology (e.g., hardware, software, and applications) that are used by the Federal Government and have an estimated useful life of 2 years or more. Capital assets include environmental restoration (ER) of land (decontamination and decommissioning) to make useful leasehold improvements and land rights, and assets whose ownership is shared by the Federal Government with other entities. This Order does not apply to capital assets acquired by State and local governments or other entities through DOE grants. Capital assets do not include intangible assets, such as the knowledge resulting from research and development and education and training.

e. External Independent Review (EIR). An EIR is conducted by reviewers outside the Department. OECM will select an appropriate contracting agency to contract for such reviews, excluding the M&O/M&I contractors. The actual selection of reviewers, contract management and contact with the Contracting Officer, and dialogue with the EIR contractor on matters pertaining to the contract are the sole purview of OECM. OECM may make nonproject/nonprogram funds available to pay for the EIR contractor and for

travel expenses of OECM staff participating in such reviews; however, OECM funds are not available for PSO staff support. The PSO's project management support office provides coordination for the EIR contractor on site, resolves issues of schedule and access while on site, gathers and provides requested and proffered information to the reviewer, and responds to the reviewer on errors of fact or needed clarification. The project management support office does not provide direction to the reviewer as to the content of the reviewer's report.

EIRs are managed by OECM as DOE's agent. Line management, including the Deputy Secretary, PSO, or a program or project organization within the PSO may request an EIR. EIRs also may be initiated in response to an external requirement, however, reviews, studies, or investigations conducted by the General Accounting Office or the Office of the Inspector General are not considered EIRs for DOE purposes. OECM coordinates all such reviews with the appropriate PSO to define review scope, choose an optimal time during the acquisition process, minimize impact on the project of conducting multiple reviews, and evaluate credentials of potential reviewing organizations and individuals.

f. Independent Cost Estimates (ICEs). ICEs are used primarily to verify project cost and schedule estimates and support the CD-2 process in establishing project performance baselines. ICEs are part of the Performance Baseline EIR, although an ICE can be combined with any EIR or IPR for efficiency. ICEs may be requested at other times and for other reasons. OECM functions as DOE's agent, working through appropriate Contracting Officers to establish contracts for ICEs. ICEs are documented in formal reports submitted to the SAE/AE by OECM. Each ICE is reconciled with the current Program Office estimate by the Federal Project Manager.

g. Independent Project Review (IPRs). An IPR is conducted by reviewers within the Department. The Deputy Secretary as SAE, or the PSO and the Operations/Field Office Manager and Program Managers and Federal Project Managers, may authorize or conduct IPRs as required. The PSO or Operations/Field Office Manager, as part of the project management oversight process, may request IPRs through the project management support office for any project, including MS projects. Irrespective of the organizational level initiating an IPR, the PSO or Operations/Field Office Manager notifies OECM of its intent to conduct such a review, and OECM is included as an invited observer for all planned reviews. OECM coordinates the extent of participation on a case-by-case basis with the appropriate organization. Committee members of an IPR team are not drawn from the responsible program office within a program secretarial organization, related contractors from the project office, or a related funding program. Reviews may use laboratory, contractor, university, or other expertise from organizations not directly funded by or related to the program/project office being reviewed.

h. Integrated Project Team. Led by the Federal program or project manager, the Integrated Project Team includes other DOE functional areas such as budget, financial, legal, safety, and contracting.

i. Major System (MS) Project. Any project or system of projects with a TPC of $400M or greater or any Other Project so designated by the Office of the Secretary. A project may be classified as an MS either solely by the Office of the Secretary or by the Deputy Secretary in response to recommendations from the appropriate PSO or head of a Departmental office, which is endorsed by the appropriate Under Secretary. OECM maintains and periodically publishes a list of MS projects.

j. Project. In general, a unique effort that supports a program mission, having defined start and end points, undertaken to create a product, facility, or system, and containing interdependent activities planned to meet a common objective or mission. Project types include planning and execution of construction, renovation, modification, line items for maintenance and repair, ER, decontamination and decommissioning efforts, information technology, and large capital equipment or technology development activities. Tasks that do not include the above elements, such as basic research, grants, ordinary repairs, maintenance of facilities, and operations are not considered projects.

k. Other Project. Any project with a TPC less than $400M and not designated as an MS project, including line item projects, general plant projects, and capital equipment, information technology, whether funded by capital or operating funds.

l. Scope. In the context of DOE program and project management directives, scope is the sum of the products and services which comprise the capital asset to be provided by a project. Scope, as defined here, is not the Federal Acquisition Regulation (FAR) definition of scope.

m. Tailoring. Tailoring is a flexible approach to most aspects of the acquisition of capital assets. Tailoring can be applied to all projects for oversight, acquisition planning, performance reviews, reporting, change control, and CDs. In a tailored approach, project documentation requirements as described in this Order are applied to a level of detail based on the projects's size, risk, and complexity. However, the tailoring is in the degree of detail, not in omitting the requirements altogether.

n. Total Estimated Cost (TEC). The TEC of a construction project is the gross cost of the project, including the cost of land and land rights; engineering, design, and inspection costs; direct and indirect construction costs; and the cost of initial equipment necessary to place the plant or installation in operation, whether funded as operating expense or construction. In recent years Congress has authorized amounts for construction projects exclusive of

amounts for the construction planning and design. In these cases, the amount authorized is used as a base for TEC, even though it does not include planning and design costs. These costs are typically capitalized. TEC does not typically apply to ER projects.

o. Total Project Cost (TPC). TPC consists of all the costs included in the TEC of a construction project plus the preconstruction costs, such as conceptual design and research and development, as well as the costs associated with the preoperational phase, such as training and startup costs.

BY ORDER OF THE SECRETARY OF ENERGY:

T.J. GLAUTHIER
DEPUTY SECRETARY

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APPLICABILITY TO THE NATIONAL NUCLEAR SECURITY ADMINISTRATION

The requirements in the following chapters include organizational responsibilities that are applicable to DOE, including NNSA. When the organizational responsibilities are identified as DOE, they include NNSA. Likewise, LPSO and PSO responsibilities also apply to Deputy Administrators for NNSA, and Operations/Field Office Manager responsibilities also apply to the Field Manager for NNSA Operations.

CHAPTER I

CRITICAL DECISIONS

A Critical Decision (CD) is a formal determination or decision at a specific point in a project phase that allows the project to proceed to the next phase and commit resources. CDs are required during the planning and execution of a project; for example, prior to commencement of conceptual design, commencement of construction, or start of operations. The CDs and the prerequisites for each project phase are shown in Attachment 4. CDs for traditional construction projects include the following:

- CD-0, Approve Mission Need
- CD-1, Approve Preliminary Baseline Range
- CD-2, Approve Performance Baseline
- CD-3, Approve Start of Construction; and
- CD-4, Approve Start of Operations or Project Closeout

The project may propose partial or phased CDs. CD determination meetings will be planned so that necessary documentation and activities can be performed without causing delay in project schedules. A schedule for planned CDs on all projects over $5M will be provided to OECM.

1. MS PROJECT CDs. All MS project CDs must be proposed by the appropriate PSO, and for NNSA approved by the Administrator, and approved by the Deputy Secretary as DOE's designated SAE before proceeding to the next project phase.

2. OTHER PROJECT CDs. All Other Project CDs must be approved by the PSO or delegated AE.

3. ENVIRONMENTAL RESTORATION (ER) AND FACILITY DISPOSITION PROJECT CDs. ER and facility disposition projects are driven by the regulatory requirements in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Resource Conservation and Recovery Act (RCRA). Therefore CD-0, CD-1,CD-2, and CD-3 for these projects are different than those of a traditional construction project. The following CDs are associated with ER and facility disposition projects; however, because of statutory time limits, potential fines, extensive documentation requirements, and the nature of the CDs, the SAE/AE, subject to approval of the PSO and notification of OECM, may decide not to require an ESAAB for all CDs. The CD will be disposed and documented by the SAE/AE.

   a. For ER projects, the CDs include:

      - CD-0, Approve Mission Need. Complete restoration screening process (preliminary assessment/site investigation) and need assessments.

- CD-1, Approve Preliminary Baseline/Proposed Work Plan. Prerequisites include Remedial Investigation/Feasibility Study and Proposed Work Plan.

- CD-2/3 (combined), Approve Performance Baseline. Start field work.

- CD-4, Project Closeout. Prerequisite is completion of all administrative, and closeout activities. Site is transferred into long-term stewardship program.

b. For facility disposition projects, the CDs include:

- CD-0, Approve Mission Need.

- CD-1 and CD-2, Approve Performance Baseline: CD-1 and CD-2 are combined. Submit conceptual information (30 to 35 percent of preliminary design activities) for baseline approval.

- CD-3 , Approve Start of Construction or Remedial Action.

- CD-4, Approve Start of Operations or Project Closeout.

c. For privatization projects:

Because privatization projects are driven by contractual agreements and shift the risk to the contractor, the issue of CDs will be addressed in the Acquisition Plan and submitted to the SAE/AE, as appropriate, for approval.

CHAPTER II

BASELINE CHANGE CONTROL

Baseline change control is initiated after CD-1 for design (scope, schedule, cost) control and after CD-2 for the performance baseline.

1. BASELINE CHANGE CONTROL APPROVAL AUTHORITY. For MS projects and Other Projects, baseline change approval authority is as follows:

   - Level 0, the SAE;
   - Level 1, the PSO;
   - Level 2, the Federal Project Manager, as delegated by the Operations/Field Office Manager or Program Manager; and
   - Level 3, the contractor.

   The appropriate PSO proposes and the SAE approves all Level 0 baseline change proposals and site selections for all facilities for new sites. The PSO must provide a copy of all approved Level 1 baseline changes to OECM.

2. THRESHOLDS. Thresholds for change control authority for MS and Other Projects will be documented in the Project Execution Plan. The change control threshold table for MS and Other Projects is shown in Attachment 3. The appropriate AE (Program Manager or Operation/Field Office Manager) may delegate Level 2 change control authority to the Federal Project Manager. This delegation of authority must be stated in the Project Execution Plan.

3. VARIANCES. A variance is a deviation from the approved scope, cost, or schedule performance. Variances must be tracked and reported. Variances should be mitigated through corrective actions and not eliminated through baseline change control unless valid rationale can be presented to justify a change in the baseline. Baseline changes are submitted for changes in technical, work scope, funding, or other directed changes.

4. PROGRAMMATIC BASELINE CHANGES. Any baseline change caused by a congressional action, such as an appropriation act that reduces funding, shall follow the baseline change control process and must be documented and approved by the appropriate SAE/AE within 4 months from the time the congressional action is enacted.

CHAPTER III

ACQUISITION PROCESS

1. PRECONCEPTUAL PLANNING. Preconceptual planning activities will focus on the program's strategic goals and objectives. The appropriate Federal program and project managers will form an Integrated Project Team (see paragraph 8) consisting of members from each organizational and customer element that affects and contributes to the project. Before a project is formally initiated, the Integrated Project Team should document its consensus on the project objectives, program and functional requirements, priorities, constraints, and the Acquisition Strategy and Acquisition Plan.

2. RISK IDENTIFICATION AND ANALYSIS. An essential part of project planning is to ensure that the risks associated with the project have been identified, analyzed, and determined to be either eliminated, mitigated, or manageable. Risk identification and analyses should be continued through the succeeding stages, including the Acquisition Plan and the Project Execution Plan. Each of the identified risks is monitored at future CD and review points to ensure that they have been satisfactorily addressed, eliminated, mitigated, or managed.

3. ACQUISITION PROCESS. The acquisition process for all projects is intended to flow in the following sequence. CD checkpoints occur at the points indicated below.

   a. Preparation of the justification of mission need document constitutes the first step in the acquisition process and initiates preconceptual planning activities. These activities continue with the preparation of the acquisition strategy, which is normally developed by DOE Federal officials. This strategy sets forth the management approach that will be used to ensure that the project contract or system of project contracts satisfies the approved mission need. The acquisition strategy can be part of the mission need document, a separate document, or a part of the Acquisition Plan. The elements of the acquisition strategy will address such issues as whether the acquisition will be conducted by DOE directly or through an M&O/M&I contractor; the extent of competition; proposed location of the project site or sites; and project size. The PSO is responsible for performing a Mission Validation Independent Project Review (IPR) on all MS projects. This is a limited review of the project prior to CD-0. It validates the mission need and the funding request. An IPR may be conducted as appropriate to assist in the CD-0 on Other Projects over $5M. The SAE/AE will have all this material for consideration in making Critical Decision-0 (see Attachment 4).

   b. Once CD-0 is obtained, the AE directs development of the conceptual design, which results in a Conceptual Design Report, an Acquisition Plan, a preliminary hazard analysis, a preliminary Project Execution Plan, and preliminary baseline range. The preliminary baseline range at the design stage consists of a cost, schedule, and scope

for the design phase, and a range for the cost, schedule, and scope for the remainder of the project. These documents are submitted for SAE/AE approval along with a PSO-validated PDS for design. The PSOs will establish a project and engineering design (PED) funding pool for all projects for FY2002 and beyond and for projects over $5M TPC, as appropriate, in accordance with the DOE Budget Formulation Handbook. Where long lead procurement is required, a phased CD-3 may be used, subject to prior budget approval and funding availability. The SAE/AE will consider the above elements in making Critical Decision-1 (see Attachment 4).

c. Once CD-1 is obtained, PED funds become available for use on preliminary design and final design, baseline development, and/or a statement of work/request for proposal for a design/build project. For long lead procurement, a separate budget request for capital funds (non-PED) may be submitted prior to CD-2 for a partial CD-3 determination. Attachment 6 shows the correlation between typical project phases and the Federal budget process, with emphasis on PED funding.

The project manager must obtain a draft Preliminary Safety Analysis Report and National Environmental Policy Act documentation, if appropriate. The project manager also must finalize the Project Execution Plan and performance baseline and reflect the results in the PDS for construction funding. A Performance Baseline EIR must be performed by OECM as agent for the Department on all projects over $5M. This is a detailed review of the entire project, including an Independent Cost Estimate, prior to CD-2. It verifies that the mission need is satisfied; validates the proposed technical, cost, and schedule baseline; and assesses the overall status of the project management and control system. The results of the EIR together with any corrective actions resulting from the EIR will be reviewed by OECM and presented to the SAE/AE to assist with Critical Decision-2 (see Attachment 4).

d. Once CD-2 is obtained, include the project in the budget submission. Final design would continue with PED funds through completion of the design. If requested and approved, long lead procurement funds are committed. The draft Preliminary Safety Analysis Report must be submitted for approval, and the DOE safety evaluation report will be issued, as appropriate. An Execution Readiness EIR must be performed by OECM on MS projects, and an IPR must be performed by the appropriate AE for Other Projects over $5M. This is a general review of the project prior to CD-3 that may range from an abridged review of specific areas within a project to a comprehensive review of the entire project. As a minimum, it verifies the readiness of the project to proceed into construction or remedial action. The results of the EIR/IPR and any corrective actions resulting from the EIR/IPR shall be reviewed by OECM and shall be presented to the AE and ESAAB equivalent board in conjunction with CD-3. The AE may request an EIR in lieu of an IPR through OECM. The Project Execution Plan and performance baseline will be updated, if required. These activities will be considered by the SAE/AE in making Critical Decision-3 (see Attachment 4).

e. Once CD-3 is obtained, execute and complete all project activities, including construction where required. Complete transition to operations planning activities, including DOE approval of Environmental, Safety and Health documentation, an operational readiness review, and an acceptance report. These activities will lead to Critical Decision-4 (see Attachment 4).

4. ACQUISITION PLAN. The Acquisition Plan provides a description of the contractual means by which the project's acquisition strategy will be carried out. Use of such a plan reduces acquisition lead time and ensures consistency in the preparation of project conceptual execution documents by providing all those involved in project management with specific information about project business objectives. The Acquisition Plan for every project contract specifies the organization (DOE or contractor) identified in the acquisition strategy to execute the project management functions.

a. DOE Award. The Acquisition Plan for acquiring a project or system of projects is developed by an Integrated Project Team, including, as a minimum, the Program Manager, the Federal Project Manager (once assigned), and a DOE Contracting Officer (provided or approved by the Director of Procurement) and approved by the appropriate SAE or AE. An Acquisition Plan prepared in accordance with Federal Acquisition Regulation (FAR) Subpart 7.1 (and FAR Part 34 for MS acquisitions) is required for every project contract or system of project contracts, that will be accomplished by direct DOE placement. M&O/M&I contractors may be consulted during the development of the Acquisition Plan for a direct DOE contract placement if those contractors are not potential competitors for the contract. In all cases, the roles and responsibilities of those involved in the acquisition process are defined in the plan, including line and matrix reporting relationships.

b. Contractor Award. For project contracts that will be accomplished by M&O/M&I contractors, the DOE Contracting Officer must ensure that the contractor's procurement system requires a written Acquisition Plan that is appropriate for the requirements and dollar value of each contract and consistent with the intent of the FAR. The Acquisition Plan for a project contract to be awarded by an M&O/M&I contractor is developed by a team of contractor employees including, as a minimum, the prospective Project Manager and Contract Negotiator. The Acquisition Plan will also be concurred in by the DOE Contracting Officer.

c. Acquisition Plan Elements. The Acquisition Plan required by the FAR Subpart 7.1 (and FAR Part 34 for MS projects) may be one document containing elements as shown in those sections of the FAR. This Acquisition Plan will document the requirements of the both parts of the FAR (as applicable) and includes, but is not limited to:

- background and objectives, including mission need statement

- description of the program of which the project(s) is a part
- cost, budget, funding, and life cycle considerations
- plan of action, including—
  - possible sources
  - a performance-based contractor incentive process
  - methods of competition
  - options for source selection procedures
  - justification for non-competitive acquisitions if this is recommended
  - contracting options and milestones for the acquisition, and
  - a statement as to whether the Government or a prime contractor will conduct the competition
- risk analysis, and mitigation strategies
- schedules, including milestones
- business considerations, including—
  - Government roles
  - contractor roles
  - interrelationships between contractors
  - interagency cooperation
  - Government-furnished property
  - security
  - international cooperation and considerations
  - make-or-buy considerations
  - warranty
  - licensing considerations
  - safety
- logistics considerations, including contractor and agency support, computer-aided acquisition systems, and other technical considerations
- a recommendation forwarding the plan to the approving authority and signed by all members of the team
- approval

d. Tailoring. (See paragraph 8.) The Acquisition Plan may be tailored to suit the size, risk, and complexity of the project. Tailoring is in the degree of detail, not in omitting the requirements altogether. The elements listed above for the Acquisition Plan are not intended to be all inclusive, nor may all the elements apply to each project. The rationale for the tailoring should be presented to the SAE/AE.

e. Approval Authority. The Acquisition Plan approval authority is the appropriate SAE or AE.

CHAPTER IV

PROJECT EXECUTION PROCESS

This chapter outlines the process and documents leading to project award.

1. PROJECT EXECUTION PLAN. The Project Execution Plan is the primary agreement on project planning and objectives between the Headquarters Program Office and the Field, which establishes roles and responsibilities and defines how the project will be executed. Of the elements described in this chapter, the Project Execution Plan, once approved, becomes a significant tool for the Project Manager through the life of the project. The Headquarters or Field Program Manager and/or the Federal Project Manager initiates a Project Execution Plan. Development of the preliminary Project Execution Plan can be started by the prime contractor or M&O/M&I at the same time as development of the Acquisition Plan or shortly after. The two plans should be synchronized. If the approved Acquisition Plan indicates that the M&O/M&I contractor has a role in the acquisition of the project as prime contractor/integrator, the M&O/M&I contractor may participate with DOE in development of the final Project Execution Plan.

   a. Project Execution Plan Elements. All projects will have both preliminary and final Project Execution Plans that are approved by the appropriate SAE/AE. Elements of the Project Execution Plan may be included by reference. Minimum elements of this plan are the following:

      - mission need justification/project objectives
      - project description
      - organizational structure; roles, responsibilities, and authorities; and accountability, including decision authority for Headquarters and Field Element, program and project management and support functions, safety analysis support functions such as health physics, Environment, Safety and Health, National Environmental Policy Act documentation, etc.
      - resource requirements
      - technical considerations, including—
        - extent of research and development and its relationship to the project
        - value engineering
        - test and evaluation
        - Environment, Safety and Health
        - Integrated Safety Management
        - sustainable building design
        - configuration management
        - system engineering, and
        - reliability, maintainability, and quality assurance

- project cost, schedule, and scope baselines (or preliminary baseline ranges for a preliminary Project Execution Plan), including separately identified contingencies, and descriptions of Levels 0, 1, 2, and 3 baseline change control thresholds
- life-cycle cost
- alternatives, trade-offs
- Risk Management Plan
- Integrated Safety Management Plan
- project controls system and reporting system
- Acquisition Plan

b. Tailoring. (See paragraph 8.) The Project Execution Plan may be tailored to suit the size, risk, and complexity of the project. Tailoring is in the degree of detail, not in omitting the requirements altogether. The elements listed above for the Project Execution Plan are not intended to be all inclusive, nor may all the elements apply to each project. The rationale for the tailoring should be presented to the SAE/AE

c. Approval Authority. The Project Execution Plan approval authority is the appropriate SAE or AE.

2. SOURCE SELECTION PLAN. If the Acquisition Plan determines that any contractor for the project will be acquired competitively, a Source Selection Plan must be developed in accordance with FAR Part 15.3 and DEAR Part 915.3. This plan will outline the criteria for selection, including technical factors (such as approach, technical risk, life cycle cost, and management approach); cost factors (including evaluation of reasonableness and risk); and an overall risk assessment. If the M&O/M&I contractor will be the prime contractor, it will develop this plan and seek approval from the appropriate procurement authority before beginning the source selection process.

When the source selection board completes the source selection process (following the requirements indicated in the Source Selection Plan), the appropriate procurement authority (either DOE or the M&O/M&I contractor) will prepare a Source Selection Board Report. If DOE prepares the report, the board members will sign and submit that report to the appropriate source selection authority for approval.

3. BUSINESS CLEARANCES. If the acquisition procurement contract is to be individually negotiated (rather than being selected through an evaluation of price and other factors), the appropriate authority should prepare both the pre- and post-negotiation business clearances in accordance with Department of Energy Acquisition Guide, Chapter 71. The pre-negotiation business clearance will specify the negotiation strategy and objectives for the elements included in the request for proposal for cost and fee, drawn from the Government estimate. The post-negotiation business clearance will show how the contractor's proposed cost and fee elements were resolved, compared to the pre-negotiation business clearance. Each business clearance is approved by the warranted DOE Contracting Officer. Negotiations cannot begin until the pre-

negotiation business clearance has been approved. Note: The SAE or AE may require clearance approval at their levels. If the M&O/M&I contractor is handling the procurement, Department of Energy Acquisition Guide requires that the contractor obtain approval of the same reports prior to negotiations and award, as applicable.

CHAPTER V

ENERGY SYSTEMS ACQUISITION ADVISORY BOARD

1. MS PROJECT ESAABs. The ESAAB advises the SAE in making MS project CDs, Level 0 baseline changes, and site selections for facilities for new sites. The ESAAB meets once every 2 months, or at the call of the SAE.

2. MEMBERSHIP. ESAAB membership includes the SAE as chair; the Under Secretaries; the DOE General Counsel; the Chief Financial Officer; the Director of OECM; the Assistant Secretary for Environment, Safety and Health; the Assistant Secretary for Environmental Management; the Deputy Administrator for Defense Programs; the Director for Office of Science; and the Director of Procurement and Assistance Management. The Deputy Secretary may designate other PSOs or functional staff as board members as needed.

3. ESAAB SECRETARIAT. The ESAAB Secretariat resides in OECM and provides administrative and analytical support and recommendations to the ESAAB.

4. OTHER PROJECT ESAABs. Each appropriate PSO appoints an ESAAB-equivalent board for advising on actions regarding those projects within the PSO office that are not MS projects. The PSO serves as AE for these projects and as chair of the ESAAB-equivalent board. The ESAAB-equivalent board replicates and conducts the same functions as those performed by the corporate ESAAB. Members may be selected from within the PSO's office or from other Headquarters functions having Departmental responsibility. At least one member is from a different PSO office and is designated by the contributing PSO. OECM provides a member of each ESAAB-equivalent board for projects $100M and greater. Each PSO provides the composition of its ESAAB-equivalent board to OECM.

5. DELEGATED OTHER PROJECT ESAABs. The PSO may delegate equivalent AE functions, including decision approvals, for those Other Projects below $100M to an SES Program Manager or an Operations/Field Office Manager. For those delegated Other Projects less than $20M, the Program Manager or Operations/Field Office Manager may further delegate equivalent AE functions to a direct reporting SES subordinate. Attachment 3 provides an overview of the allowable AE delegations. The AE so designated establishes and chairs an ESAAB-equivalent board, notifies OECM of its composition, invites OECM to all board meetings, and provides all agendas and minutes to the appropriate PSO project management support office. However, OECM is not a board member.

6. DISCRETIONARY BOARD MEETINGS. The SAE/AE may, at their discretion, dispense with an ESAAB or ESAAB-equivalent board meeting when making CD-0 and CD-4, or programmatic baseline changes (see Chapter II, paragraph 4). This does not obviate the need for the AE to document relevant considerations nor the decision itself.

CHAPTER VI

PERFORMANCE REVIEWS AND REPORTING

1. PERFORMANCE REVIEWS. For all projects, the appropriate AE conducts a quarterly project performance review with the Federal Project Manager and staff. The contractor may participate in this review as appropriate. For MS projects, the schedule and agenda are coordinated with OECM, and OECM is invited to participate with the PSO in the review. Quarterly performance reviews for Other Projects with TPCs less than $100M may be delegated to a SES Program Manager or Operations/Field Office Manager.[1] The contractor may participate in this review as appropriate. OECM is invited to participate in all performance reviews for projects with a TPC over $5M.

2. INDEPENDENT REVIEWS. DOE recognizes that independent reviews are valuable in assessing the status and health of its projects. An independent review is conducted by a non-proponent of the project. It may be a science-based or engineering-oriented peer review, a review of the project management structure and interrelationships between key organizational components, a review targeted to a specific issue such as cost or budget, a review covering safety, or a combination thereof. Independent reviews may be combined for efficiency, as appropriate. For definitions of such reviews see paragraph 8; for application of these reviews see Chapter III.

3. REPORTING. The Federal Project Manager submits monthly and/or quarterly project status reports to line management, the project management support office, and OECM using the data elements, analyses, and other information specified in the DOE Program and Project Management Manual (see paragraph 6, of the Order). Project reporting typically begins during CD-0 with (1) a comparison of contractor performance with the conceptual design schedule and cost plan and (2) a comparison of earned value performance against the preliminary baseline range at CD-1. Reporting of earned value performance with the performance baseline is initiated at CD-2. The Program Manager and Federal Project Manager will define specific reporting requirements in the appropriate project documentation. At a minimum, such reports for projects with TPCs greater than $20M include the Earned Value Management System performance and financial status.

4. DOE REPORTING SYSTEM. A DOE project management and reporting system for tracking project performance, corrective actions, and requiring trending data will be established by OECM for cost, schedule, and scope, and for the timely resolution of corrective actions.

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[1] To accommodate the large number of Environmental Management (EM) projects, the EM PSO may delegate quarterly reviews (for other than MS projects) to the Principal Deputy and/or cognizant Deputy Assistant Secretary.

CHAPTER VII

ADDITIONAL REQUIREMENTS

1. Chief Operating Officer Watch List. All Federal Project Managers and their appropriate PSOs are required to inform the Deputy Secretary, with a copy to OECM, on project issues that may contribute to an expected unfavorable Level 0 scope change, an expected unfavorable Level 0 milestone schedule variance, or an expected unfavorable Level 0 cost variance in TEC and/or TPC. Projects that encounter significant cost and schedule variances and/or technical issues or projects that develop other problems may be placed on the Chief Operating Officer Watch List and could face funding consequences. Once placed on this list, projects require corrective action plans, specific corporate reporting requirements, and periodic review by the Deputy Secretary, arranged through OECM. These projects will be released from the list when Watch List milestones are completed, progress on corrective action warrants, or the project recovers (i.e., the variances fall back within established criteria). A flow diagram of the steps and criteria used in the Chief Operating Officer Watch List is shown in Attachment 7.

2. Project Manager Development. OECM, in coordination with the program and other DOE support offices, is responsible for establishing and monitoring a project manager development program for Federal program and project managers and other staff involved in project acquisition.

3. Contractor Project Management System. The DOE prime contractor's project management system must satisfy, at a minimum, the requirements specified in the CRD, Attachment 1. These requirements must be included in all project acquisition solicitations and contracts. Contractor compliance with these requirements will be determined through the use of DOE reviews of contractor project management system descriptions, procedures, and operations.

   Contracts with project TPCs of $20M or more — except for time-and-materials contracts, firm fixed-price contracts, or level-of-effort support contracts — must use Earned Value Management Systems. However, these contractors must have adequate control systems that suit the nature of the project and reflect good business practices. The head of the contracting activity is responsible for ensuring that all applicable CRD provisions are included in project contracts.

4. Value Engineering. DOE is committed to the use of value engineering to derive the lowest life-cycle cost of a capital asset. Value engineering yields the greatest cost savings when applied during the planning and design phases of a project. Value engineering should also be used during the construction phase of a project.

5. Integrated Safety Management. Safety must be integrated into both Federal and contractor management and work practices at all levels in compliance with DOE P 450.4, SAFETY MANAGEMENT SYSTEM POLICY; DOE P 411.1, SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES POLICY; and DOE M 411.1-1A, SAFETY MANAGEMENT FUNCTIONS, RESPONSIBILITIES, AND AUTHORITIES MANUAL. Missions will be accomplished through effective integration of safety management into all design and construction phases of a project while protecting the public, the worker, and the environment. For facilities that contain hazardous materials, continuous coordination is necessary between the facility design process and the parallel development of the safety analysis.

6. Sustainable Building Design. New Federal buildings must meet or exceed energy efficiency standards established under the Energy Policy Act, Public Law 102-486, Section 305. Sustainable building design principles must be applied to the siting, design, and construction of new facilities.

CONTRACTOR REQUIREMENTS DOCUMENT

DOE O 413.3, PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS

The Department of Energy (DOE) prime contractor's project management system must satisfy the following requirements.

1. The industry standard for project control systems described in American National Standards Institute (ANSI) EIA-748, *Earned Value Management Systems,* must be implemented on all projects with a total project cost (TPC) greater than $20M for control of project performance during the project execution phase.

2. Cost and schedule performance, milestone status, and financial status must be reported to DOE on a monthly basis using DOE-approved work breakdown structure elements and data elements for all projects with a TPC greater than or equal to $20M, except for time-and-materials contracts, firm fixed-priced contracts, or level-of-effort support contracts, for control of project performance during the project execution phase. The report must also include variance analyses and corrective action plans that integrate cost, schedule, and scope if variances exceed DOE-established reporting thresholds. Also reported will be analyses of cost and schedule trends, financial status, and baseline change control activity, including the allocation of management reserve, potential problems, and critical issues.

3. For project contracts that will be accomplished by M&O/M&I contractors, the contractor must have a written Acquisition Plan that is appropriate for the requirement and dollar value of each contract and consistent with the intent of the FAR. The Acquisition Plan for a project contract to be awarded by an M&O/M&I contractor is developed by a team of contractor employees including, as a minimum, the prospective Project Manager and Contract Negotiator. The Acquisition Plan will also be concurred in by the DOE Contracting Officer.

4. Technical performance analyses and corrective action plans must be reported to DOE for variances to the project baseline objectives resulting from design reviews, component and system tests, and simulations.

5. A critical path schedule and a project master schedule must be developed and maintained.

6. Cost estimating must be an integral part of cost baseline and life-cycle cost development and maintenance, budget request development, and estimates at completion.

7. Project technical, cost, and schedule risks must be identified, quantified, and mitigated (as appropriate). Risk mitigation strategies must be developed and implemented.

8. An integrated contractor technical, cost, and schedule baseline must be developed and maintained through the use of a contractor-level change control board.

9. A configuration management process must be established that controls changes to the physical configuration of project facilities, structures, systems, and components in compliance with ANSI/EIA-649, *National Consensus Standard for Configuration Management*. This process must also ensure that the configuration is in agreement with the performance objectives in the technical baseline.

10. A value engineering process must be used that identifies high-cost project activities in order to realize a maximum return on investment through the use of systems engineering trade-offs and functional analyses that identify alternate means of achieving the same function at a lower life-cycle cost.

11. A quality assurance program must be developed and implemented for the contract scope of work in compliance with DOE O 414.1A, QUALITY ASSURANCE, at the beginning of the project and maintained over the project life. This program must assign responsibilities and authority for quality, define policy and requirements, and provide for the performance and assessment of work.

12. An Integrated Safety Management system must be developed and implemented for the contract scope of work in compliance with DEAR 970-5204-2, Integration of Environmental, Safety and Health into Work Planning and Execution.

13. Sustainable building design principles must be applied to the siting, design, and construction of new facilities.

AUTHORITY AND ROLES AND RESPONSIBILITY FOR LINE MANAGERS	
Approval Authority	**Roles and Responsibilities**
Deputy Secretary • Policy and procedures • Critical Decisions for MS projects • Conceptual Design Report, Project Execution Plan, Acquisition Plan and documents for MS projects • Site selections for facilities for new sites • Level 0 baseline changes	**Deputy Secretary** • Secretarial Acquisition Executive for all projects • Develop Policy and procedures • Select and monitor Chief Operating Officer Watch List projects • Direct External Independent Reviews and other reviews • Chair ESAAB • Delegate project authority as appropriate
Program Secretarial Officer • Acquisition Executive delegation of Other Projects of less than $100M to an SES Program Manager or Operations/Field Office Manager • Critical Decisions for Other Projects • Federal Project Manager selection • Conceptual Design Report, Project Execution Plan, Acquisition Plan, and documents for Other Projects • Level 1 baseline changes	**Program Secretarial Officer** • Acquisition Executive as delegated for Other Projects • Conduct performance reviews • Chair ESAAB-equivalent board • Direct Independent Project Reviews, and other reviews • Delegate project authority as appropriate
Program Manager • Approval authority as delegated by PSO for Conceptual Design Report, Project Execution Plan, Acquisition Plan and project documents for Other Projects • Level 2 baseline change (per Project Execution Plan with delegation allowed to the Federal Project Manager)	**Program Manager** • Acquisition Executive as delegated for Other Projects • Develop Acquisition Plan • Chair ESAAB-equivalent board, if delegated as the Acquisition Executive • Direct Independent Project Reviews, and other reviews • Conduct performance reviews

AUTHORITY AND ROLES AND RESPONSIBILITY FOR LINE MANAGERS	
Approval Authority	**Roles and Responsibilities**
Operations/Field Office Manager • Acquisition Executive of Other Projects of less than $20M to a direct reporting SES subordinate • Approval authority as delegated by PSO for Conceptual Design Report, Project Execution Plan, Acquisition Plan, and documents for Other Projects • Level 2 baseline change (per Project Execution Plan with delegation allowed to the Federal Project Manager)	**Operations/Field Office Manager** • Acquisition Executive as delegated for Other Projects • Chair ESAAB-equivalent board, if delegated as the Acquisition Executive • Conduct performance reviews • Support Federal Project Manager support functions • Direct Independent Project Reviews, and other reviews
Federal Project Manager • Level 2 baseline changes, as delegated by the Program Manager or Operations/Field Office Manager in accordance with the Project Execution Plan • Project reporting	**Federal Project Manager** • Develop Acquisition Plan • Develop Project Execution Plan • Conduct project performance reviews and report results to senior officials • Manage and direct contractor as the Contracting Officer's Technical Representative, as assigned by the Contracting Officer • Manage Independent Project Reviews, and other reviews • Allocate project funding and authorize work activities
Contractor Project Manager • Approval authority as directed by the contract • Level 3 baseline change (per Project Execution Plan)	**Contractor Project Manager** • Roles and responsibilities as required by the contract. For example: – Develop/assist Project Execution Plan – Execute scope of work – Report to Federal Project Manager for project execution

DECISION AUTHORITY THRESHOLDS

<table>
<tr><th>Project Type</th><th>Cricital Decision Authority</th><th colspan="2">Typical Project Requirements</th></tr>
<tr><td>Major System Projects</td><td>Secretarial Acquisition Executive</td><td colspan="2">• Quarterly review by PSO
• Performance Baseline External Independent Review (EIR)
• Execution Readiness EIR
• Energy System Acquistion Advisory Board
• Earned Value Management System reporting required
$400M</td></tr>
<tr><td rowspan="3">Other Projects</td><td rowspan="3">Program Secretarial Officer (Acquisition Executive)</td><td>• Quarterly review by PSO
• Performance Baseline EIR
• Execution Readiness Independent Project Review
• Energy System Acquistion Advisory Board-equivalent
• Earned Value Management System reporting required
$100M</td><td>Acquisition Executive Delegation Allowed</td></tr>
<tr><td>• Quarterly review by Program Secretarial Officer or delegate
• Performance Baseline EIR
• Execution Readiness Independent Project Review
• Energy System Acquistion Advisory Board-equivalent
• Earned Value Management System reporting required
$20M</td><td>To a Senior Executive Service program manager or operations/ field office manager</td></tr>
<tr><td>• Quarterly review by Program Secretarial Officer or delegate
• Performance Baseline EIR
• Execution Readiness Independent Project Review
• Energy System Acquistion Advisory Board-equivalent
• Earned Value Management System reporting <u>NOT</u> required
$5M</td><td>To a Senior Executive Service direct reporting subordinate of the operations/ field office manager</td></tr>
</table>

PROJECT ACQUISITION PROCESS AND CRITICAL DECISIONS

Project Planning Phase		Project Execution Phase			Mission
Preconceptual Planning	Conceptual Design	Preliminary Design	Final Design	Construction	Operations

CD-0	CD-1	CD-2	CD-3	CD-4
Approve Mission Need	Approve Preliminary Baseline Range	Approve Performance Baseline	Approve Start of Construction	Approve Start of Operations or Project Closeout

See Page 2 for CDs on Environmental Restoration and Facility Disposition Projects

CD-0	CD-1	CD-2	CD-3	CD-4
Actions Authorized by Critical Decision Approval				
• Proceed with conceptual design using program funds • Request PED funding	• Allow expenditure of PED funds for design	• Establish baseline budget for construction • Continue design • Request construction funding	• Approve expenditure of funds for construction	• Allow start of operations or project closeout
Critical Decision Prerequisites				
• Justification of mission need document • Acquisition Strategy • Preconceptual planning • Mission Need Independent Project Review	• Acquisition Plan • Conceptual Design Report • Preliminary Project Execution Plan and baseline range • Project Data Sheet for design • Verification of mission need • Preliminary Hazard Analysis Report	• Preliminary design • Review of contractor project management system • Final Project Execution Plan and performance baseline • Independent cost estimate • National Environmental Policy Act documentation • Project Data Sheet for construction • Draft Preliminary Safety Analysis Report • Performance Baseline External Independent Review	• Update Project Execution Plan and performance baseline • Final design and procurement packages **(**)** • Verification of mission need • Budget and congressional authorization and appropriation enacted • Approval of Safety documentation • Execution Readiness Independent Review	• Operational Readiness Review and acceptance report • Project transition to operations report • Final Safety Analysis Report **After CD-4** **<u>Closeout</u>** • Project closeout report

(**) To the degree appropriate to initiate construction as scheduled.

CRITICAL DECISIONS FOR ENVIRONMENTAL RESTORATION PROJECTS

Project Planning Phase		Project Execution Phase			Mission
Preconceptual Planning	Conceptual Design	Preliminary Design	Final Design	Construction	Operations

CD-0	**CD-1**	**CD-2/3**	**CD-4**
Approve Mission Need	Approve Preliminary Baseline/ Proposed Work Plan	Approve Baseline, Start Field Work	Approve Start of Operations or Project Closeout

CRITICAL DECISIONS FOR FACILITY DISPOSITION PROJECTS

Project Planning Phase		Project Execution Phase			Mission
Preconceptual Planning	Conceptual Design	Preliminary Design	Final Design	Construction	Operations

CD-0	**CD-1 / CD-2** (Combined Decision)	**CD-3**	**CD-4**
Approve Mission Need	Approve Performance Baseline	Approve Start of Construction or Remedial Action	Approve Start of Operations or Project Closeout

BASELINE CHANGE CONTROL APPROVAL THRESHOLDS

1. APPROVAL AUTHORITY

Level 0 Changes - Secretarial Acquisition Executive
Level 1 Changes - Program Secretarial Officer
Level 2 Changes - Federal Project Manager as delegated by the Operations/Field Office Manager or Program Manager
Level 3 Changes - Contractor

2.a MAJOR SYSTEM PROJECTS

Major System	Level 0	Level 1	Level 2/3
Technical Scope	Changes to scope that affect mission need requirements.	Changes to scope that may affect operation functions but does not affect mission need.	As defined in the Project Execution Plan.
Schedule	6 or more months increase (cumulative) in a project-level schedule milestone date.	3 to 6 months increase (cumulative) in a project-level schedule milestone date.	As defined in the Project Execution Plan.
Cost	Any increase in Total Project Cost and/or increase in Total Estimated Cost. **	Project cost sub-elements as defined in the Project Execution Plan.	As defined in the Project Execution Plan.

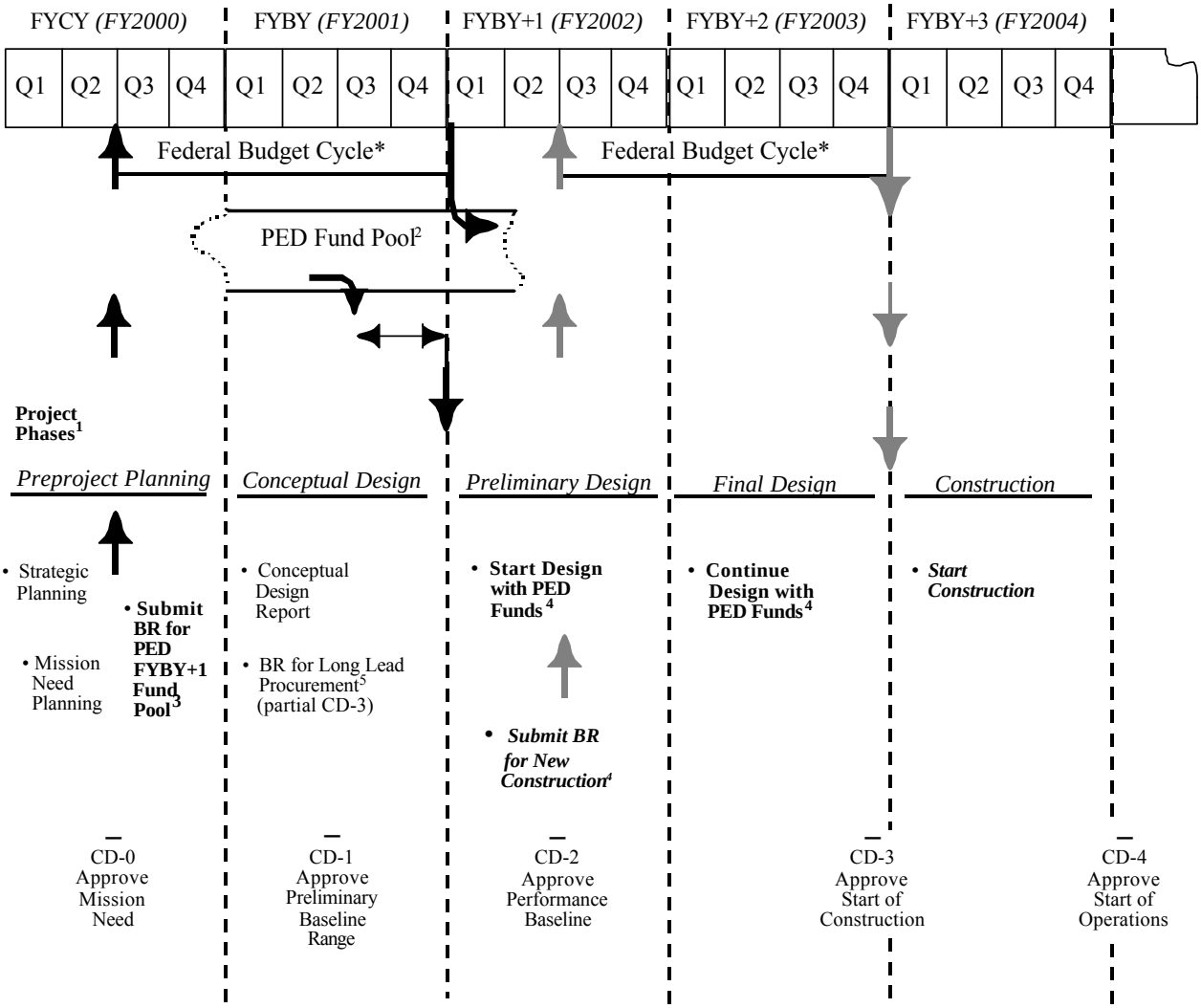
2.b OTHER PROJECTS

Other Projects *	Level 0	Level 1	Level 2/3
Technical Scope	New scope/performance not in conformance with current approved Project Data Sheet	Changes to scope that affect mission need requirements.	As defined in the Project Execution Plan.
Schedule	6 or more months increase (cumulative) in a project-level schedule milestone date.	3-6 or more months increase (cumulative) in a project-level schedule milestone date.	As defined in the Project Execution Plan.
Cost	Baseline change of $5M, or 25 percent of Total Project Cost and/or Total Estimated Cost (whichever is less)	Any increase in Total Project Cost and/or increase in Total Estimated Cost.**	As defined in the Project Execution Plan.

* For Other Projects less than $100M, the PSO may delegate Level 1 approval authority to the Program Manager or Operations/Field Office Manager. General plant projects, accelerator improvement projects, capital equipment projects, and operating expense funded projects that are $5M or less are the responsibility of the Federal Project Manager as delegated by the Operations/Field Office Manager.

** Total Estimated Cost does not apply to environmental restoration projects.

TYPICAL PROJECT PHASES CORRELATE WITH THE FEDERAL BUDGET PROCESS



1. The chart is a guide to show how the project phases might typically fit into the annual budget cycle. Actual projects will have different time frames and should be mapped against the budget cycle accordingly.

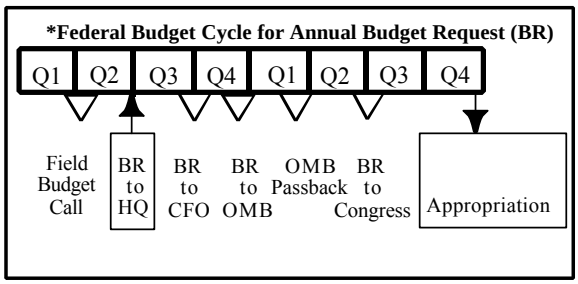
2. The PED Fund Pool is a rolling funding source for capital design that Congress appropriates money to each year.

3. PSOs perform strategic planning to build an FYBY+1 Priority Project List. The BR for PED funds for these projects is based on parametric comparisons and historical project data. In the next fiscal year, the Budget Year becomes the Current Year and the planning process starts again for the new FYBY+1 project.

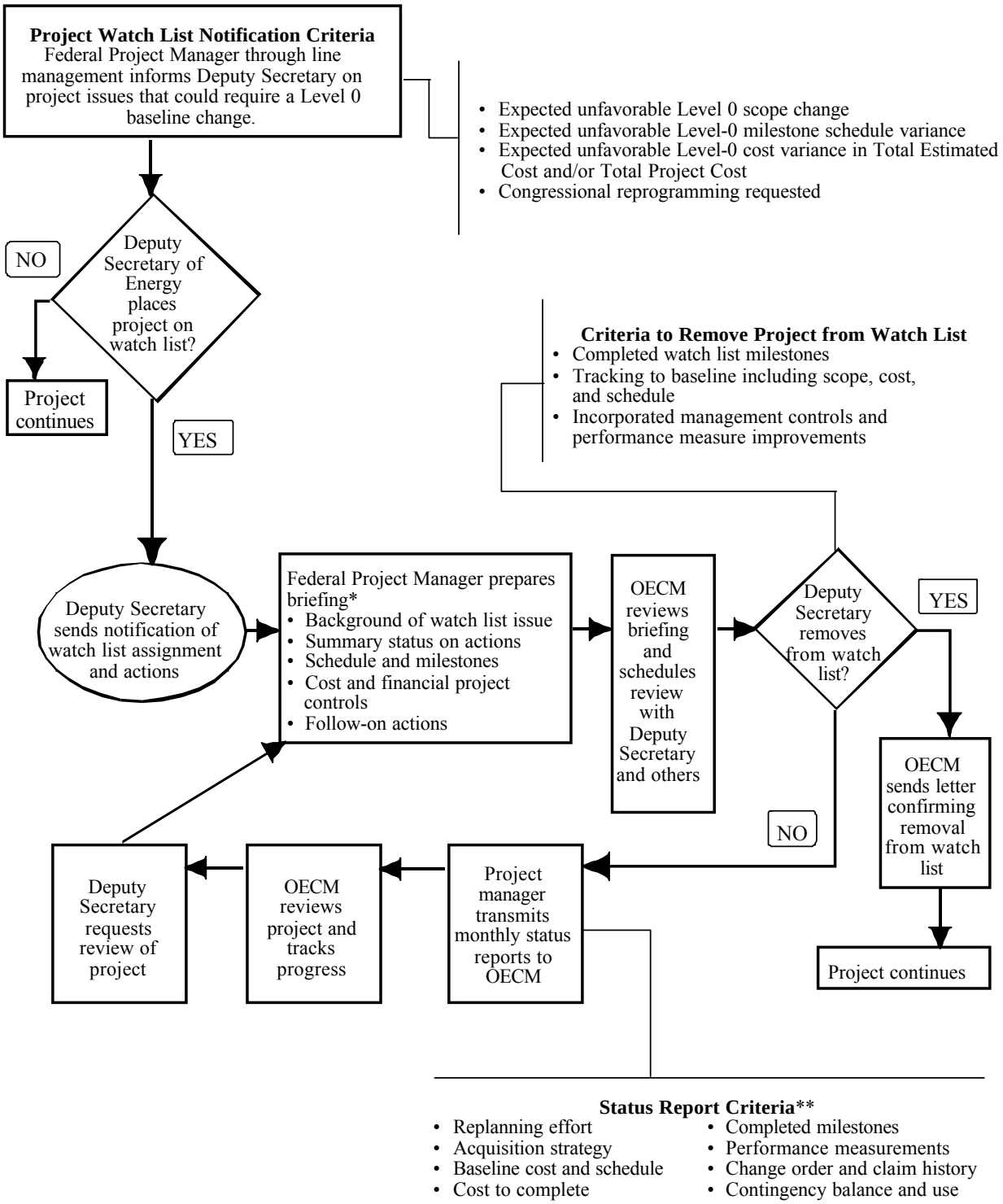
4. PSOs may authorize PED funds any time after CD-1 approval. This provides a window of opportunity to complete preliminary design earlier so the BR for new construction can be submitted in time for the next fiscal budget cycle.

5. If long lead procurement (LLP) is required, a BR for LLP funding should be approved as a partial CD-3 during the conceptual design phase and submitted into the budget cycle to ensure timely receipt of LLP funds.

PED - Project and Engineering Design
BR - Budget Request
CD - Critical Decision



CHIEF OPERATING OFFICER PROJECT WATCH LIST



* Briefing geared specifically to address reason(s) project is on watch list and proposed resolution(s)

** Status report geared to the phase of project execution